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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,343	01/16/2001	James Huang	ACR0009-US	2147

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EXAMINER	
CHO, HONG SOL	
ART UNIT	**PAPER NUMBER**
2662	

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/759,343	HUANG, JAMES	
	Examiner	Art Unit	
	Hong Cho	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *6/8/2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *6-9* is/are allowed.

6)☒ Claim(s) *1-5,10 and 11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 January 2001* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is a response to the RCE filed on 6/8/2005. Claims 1-11 are pending in the instant application.

Claim Rejections - 35 USC § 112, first paragraph

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-5, 10 and 11 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling.

Re claim 1, "the repetitive step of moving the pointer to point to an IP address previous to that presently pointed in the list" critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The above quoted claim limitation is critical or essential to the practice of the invention because it enables the function of dynamic routing to be performed by finding a message-routing –in-charge host in each domain of the IP address by going through the IP list of routers so that each message-routing –in-charge host will function as a next sending host in routing packets to next-hop router.

Claims 2-5, 10 and 11 depend on claim1 are therefore similarly rejected.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-5, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aggarwal et al (U.S 5675741), hereinafter referred to as Aggarwal in view of He et al (U.S 6671259), hereinafter referred to as He and in further view of Ogle et al (6052736), hereinafter referred to as Ogle.

For the purpose of the examination, "a message-routing-in-charge host in the domain of the IP address" is treated same as a next-hop router in a path list.

Re claims 1 and 3, Aggarwal discloses determining a communications path between a source and destination in an IP network by compiling a path list of next-hop routers between the source and destination node (*dynamic routing for efficiently determining a message-transporting path between a sending host and destination host on the Internet by finding a routing host when the sending host cannot effectively connect to the destination host*, abstract). Aggarwal discloses attempting to transport messages to the destination host by the sending host when determining a communications path

between a source and destination in an IP network. Aggarwal discloses compiling a path list of IP addresses for next-hop routers on the path between source IP address and the destination IP address (*finding a series of routers which can be effectively connected to between the sending host and the destination host and successively putting the IP addresses of the series of routers into a list*, column 2, lines 32-34). Aggarwal discloses checking the number of IP addresses in a list to see the list includes at least one IP address (column 2, lines 59-62) but fails to disclose finding a domain name of the IP address of the list pointed by the pointer via Domain Name Service (DNS) and converting an IP address to a domain name. He discloses DNS to resolve domain names into IP addresses. Since DNS translates domain names into IP addresses, it provides a way to translate IP addresses to domain names. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify DNS of He to convert an IP address to a domain name so that the domain name can be used as a host name of the IP address to provide domain name routing.

Aggarwal does not disclose sending the messages to the found message-routing-in-charge host, wherein the message-routing-in-charge host is regarded as another sending host and ending the steps of dynamic routing when a message is successfully transported. However, Ogle discloses a typical routing procedure that messages are routed from a source to a destination node through interconnected routing devices (figure 1, column 1, lines 44-55). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to implement the routing procedure of Ogle into the system of Aggarwal so that message routing based on domain name routing

in a network can be performed dynamically through interconnected routers selected from a path list created by Aggarwal.

Re claim 2, Aggarwal discloses a path-tracing program to find the series of routers between the sending host and the destination host. Aggarwal discloses the source host sending an IP datagram with a time-to-live (TTL) field with a value of one to the destination host, and obtains an IP address of the first router by receiving an Internet Control Message Protocol (ICMP) time-out message fro the first router, the sending host continuously send an IP datagram having a TTL field with a value repeatedly increased by one in order to obtain the IP addresses of the series of routers which can be effectively connected to until the sending host cannot receive any ICMP time-out message (figure 2; column 3, line 55 to column 4, line 20; column 6, line 42 to column 8, line 3).

Re claims 4 and 5, Aggarwal fails to disclose using a name of message-sending service as an alias of the message-routing host to find the IP address of the message-routing-in-charge host by regarding the name of message-sending service as a querying name wherein an IP address of a message-routing host registered beforehand in the Well Known Service (WKS) record of the DNS. He discloses using domain names, recorded in a database of DNS resource records (WKS is one of resource records), to find the IP address of the message-routing-in-charge host by using the name of message-sending service as a querying name (column 5, lines 18-25). It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement DNS of He to convert well known domain names to IP address based on table lookup in DNS by

using the name of message-sending service as a querying name because domain names are easier to remember than IP numbers.

Re claim 10, Aggarwal discloses checking the number of IP addresses and if at least one IP address is not found, then keep the message in the sending host for a predetermined time and attempt to transport messages to the destination host (column 2, lines 50-52).

Re claim 11, Aggarwal discloses finding the message-routing-in-charge host and if the message-routing-in-charge host is not found, then finding a domain of the IP address of a message-routing-in-charge host found in a path list (column 2, lines 57-62).

Allowable Subject Matter

6. Claims 6-9 are allowable.

The following is an examiner's statement for reasons for allowance.

7. Claim 6 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a network communication system for efficiently determining a message-transporting path between a sending host and destination host on the Internet by finding a routing host when the sending host cannot effectively connect to the destination host, wherein the system comprising a tracing means for finding a series of routers which can be effectively connected to between the sending host and destination host and successively putting the routers' IP addresses into a list, a memory means for storing the list, a pointing means for pointing a

pointer to an IP address of the list, a judging means for judging whether the list comprises at least one IP address and judging whether the IP address pointed by the pointer is the first IP address of the list, a searching means for finding a domain of the IP address pointed by the pointer and finding a message-routing-in-charge host in the domain, wherein at the beginning, when the judging means judges that the list comprises at least one IP address, the pointing means moves the pointer to point to the last IP address of the list and when the searching means can not find the message-routing-in-charge host in the domain of the IP address pointed by the pointer, the pointing means moves the pointer to point to an IP address previous to that presently pointed in the list, wherein the pointing means continuously moves the pointer to point to a previous IP address until the searching means finds out the message-routing- in-charge host or the judging means judges that the pointed IP address is the first IP address of the list.

Response to Arguments

8. Applicant's arguments filed 5/11/2005 have been fully considered but they are not persuasive.

On pages 7 and 8 the Applicant argues that Ogle does not teach step g of a claim 1, "sending the messages to the found message-routing-in-charge host via at least one of said series of routers, wherein the message-routing-in-charge host is regarded as another sending host." The Examiner respectfully disagrees. Ogle discloses a typical routing in figure 1 where the sending host 28 sends a message to the destination host 30 via routers

20 and 24 over network. The routing device 20 directs the datagram to routing device 24, that is, routing device 20 functions as another sending host (column 1, lines 36-42). Therefore, the Examiner concludes that the rejection of claims 1-5, 10 and 11 stands rejected.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3088.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hc
Hong Cho
Patent Examiner
6/24/2005

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